## This Page Is Inserted by IFW Operations and is not a part of the Official Record

## BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

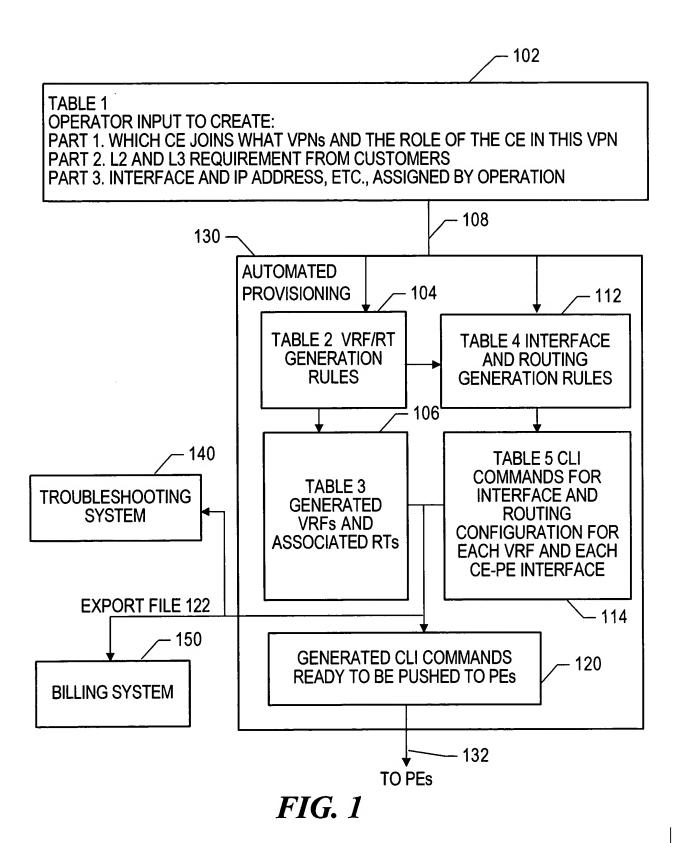
- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

## IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents will not correct images, please do not report the images to the Image Problem Mailbox.

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515

1/9



Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515

	Customer B								Spoke Spoke	bbb		16	Static		5	PE1	POS3/					
	Custo								Spoke	FR		32	RIP		4	PE1						
						Client			Spoke	ddd	<b>CRC 32</b>			Area 1	SF	E2						
									Spoke		CRC 16 CRC 32	,			5	PE1						
		CE9				Client	-	Spoke		ddd	CRC 16				SF	PE2	POS3/1					
2		CE8				Server Client							RIP		S	PE3	GE2/0	pools.				
BLE 10		CE7					41	anu anu		FR				Area 0	SJ	PE3	S1/0/15.0 GE2/0 POS3/1	IP address	10	10		
S/VPN SERVICE PROVISIONING TABLE 102	tomer A	CE6						anh anh xqe anh		Aal5snap FR	UBR		Static		જ	PE3	ATM4/ 0.1	can be assigned manually or automatically from IP address pools				
OVISIO		CE5						Spoke		ddd				Area 7	SJ	PE3		or automat				
/ICE PR		CE4				Client				FR	CRC 32   CRC 32			Area 0	4	PE1		manually				
N SER		CE3							Hub	ddd	<b>CRC 32</b>		RIP		SF	PE2		e assigned				
<b>IPLS/VF</b>		CE2				Server				ddd	<b>CRC 32</b>				SF	PE2	POS3/0	ask can be				
<b>EXAMPLE OF MPL</b>		CE1						эроке				2M/32		Area 0		PE1	ATM4/ 4.10  POS3/0 	IP address/mask				
EXAM			Full Mesh	Full Mesh	Full Mesh	Central Service			H&S 1 VRF			CRC, Clock, ATM VC, etc)	quirement		Location of CE	밆		P address/mask	Inbound QoS (profile #)	Outbound QoS (profile #)		2
										> L2 rec	Enca	CRC, VC, e	L3 re	Routi	Locat	TID III		IP ad	Inbound ( (profile #)	Outbo (profil	MD5	Others
						Part 1	202						~	Part 2	<b>7</b> 07				~	Part 3	200	

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515 3/9

TABLE 2: LOGICAL MAPPING OF VRF AND ASSOCIATED RTs TO VPN FOR DIFFERENT TOPOLOGIES	FM = FULL MESH HB1 = ONE VRF BASED HUB AND SPOKE HB2 = TWO VRF BASED HUB AND SPOKE	I m = SEQUENCE NUMBER OF CE
IG OF VRF AND ASSOCIATED RTS T	IE VRF BASED HUB AND SPOKE HB	n = SEQUENCE NUMBER OF VPN
TABLE 2: LOGICAL MAPPIN	FM = FULL MESH HB1 = ON	CS = CENTRAL SERVICE

7 306	NOTES	One VRF on Each PE One RT per VRF	One VRFs for each CE (even on PE) One unique RT for HUB_Hnb VRF	One unique RT for HUB_Spoke VRF Two RTs for each spoke CE	CE VRF on different PEs.	One VRFs for each CE (even on PE) Two RTs for HUB VRF Two RTs for Spoke CE VRF but they are same for all CE	VRF on different PEs.	One VR	Two RTs for each Spoke VRF	
			VRF_HS2_Spoke_m Export HS2_n_Hub Export HS2_n_Spoke			VRF_HS1_Spoke_m Export HS1_n_Hub Import HS1_n_Spoke		VRF_CS_n_Spoke_m	Export CS_n_Server_import   Imnort CS_n_Server	
7 304	S (IN ITALIC)	VRF_FM_n Both FM_n	VRF_HS2_HUB_Spoke Export HS2_n_Spoke							
	VRF (IN BOLD) AND RTS (IN ITALIC)		VRF_HS2_HUB_Hub Import HS2_n_Hub			VRF_HS1_HUB Export HS1_n Spoke Import HS1_n_Hub		VRF_CS_n_Server	Both CS_n_server	CS_n_Server_Import
7 302	VPN TOPOLOGY	FULL MESH 310	H&S TWO	BASED <u>312</u>		H&S ONE VRF BASED (WITH	DEFAULT ROUTE) 314	CENTRAL	SERVICE 316	

ON PE1 440		402		404	406		408		410		412	VRF on PE1	ō				
440		Full Mesh	Full Mesh	10.18	rull Mesn	Central	Service	H&S	2 VRFs	H&S	1 VRF	PE1	ON PE2 450		Full	Full	L
7 420	CE1	Both FM_1	Full Mesh Both FM_2					Export HS2_5_Hub	Import HS2_5_Spoke		^	VRF_1		CE2	Full Mesh	Full Mesh	2 1 THE C 1 THE C
422	CE4	Both FM_1	Both FM_2			Export	Import		oke			VRF_2					
424		M_1	M_2			CS_4_Server_Import	Import CS_4_Server_Import							CE3			0 112 117 0
7 426		Both FM_1		Doth CAL 2	בסנוו רוא_3					Export HS1_6_Hub	1S1_6_Spoke	VRF_3		CE9	Both FM_1		
428		Both FM_1								Export HS1_6_Hub	Import HS1_6_Spoke	VRF_4 4 <u>32</u>					C 111 47-0
430		Both FM_1								Export HS1_6_Hub	Import HS1_6_Spoke						
							,	Attoi		In	ven	No.: 103 tor: Che I W. Wh	n, et a	ıl.		515	

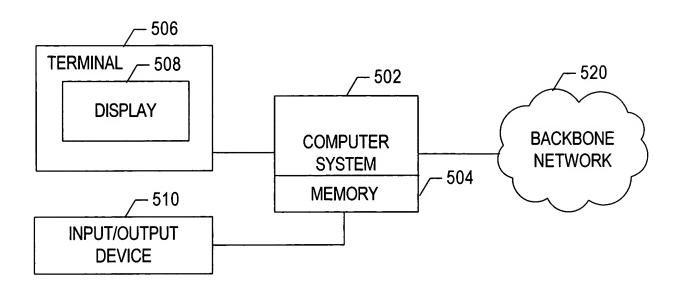
				The second secon	
		CE2	CE3	CE9	
Ш	Full Mesh			Both FM_1	
Ш	Full Mesh				
L	ull Mesh	Full Mesh   Both FM 3	Both FM_3		Both FM_3
	Central	Both CS_4_Server Import		Export CS_4_Server_Import	Export CS_4_Server_Import   Export CS_4_Server_Import
<u>S</u>	Service	CS_4_Server_Import		Import CS_4_Server_Export	Import CS_4_Server_Export
I	H&S			Export HS1_5_Hub	
	2 VRFs			Import HS1_5_Spoke	
I	H&S		Export HS1_6_Spoke		Export HS1_6_Hub
_	1 VRF		Import HS1_6_Hub		Import HS1_6_Spoke
VRF on PE2	=2	VRF_1	VRF_2	VRF_3	VRF_4

FIG. 4A

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515 5/9

	ImportHS2 5 Spoke			Import HS2_5 Spoke	2 VRFs
	Export HS2_5_Hub	Import HS2_5_Hub	Export HS2_5_Spoke	Export HS2_5_Hub	H&S
ort	Import CS_4_Server_Imp				Service
	Both CS_4_Server				Central
	Both FM_3				Full Mesh
		Both FM_2			Full Mesh
					Full Mesh
	CE8	CE7	CE6		Topology   CE5

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515 **6/9** 



**FIG.** 5

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515

7/9

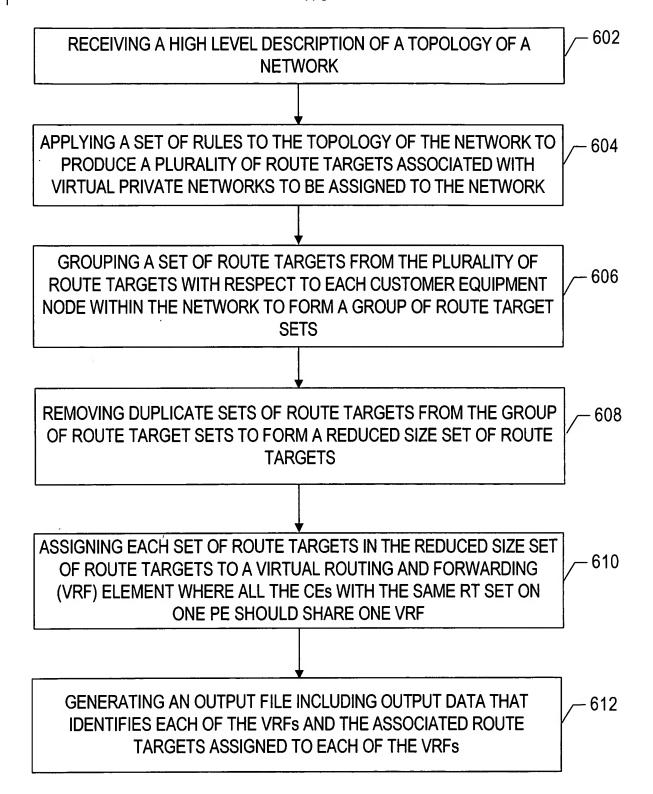


FIG. 6

Docket No.: 1033-LB1029 Inventor: Chen, et al. Attorney: Russell W. White (512) 327-5515 **8/9** 

PROVIDING A SET OF RULES REGARDING ASSIGNMENT OF ROUTE TARGETS FOR EACH OF A PLURALITY OF VIRTUAL PRIVATE NETWORKS

CONFIGURING PROVIDER EQUIPMENT ELEMENTS OF A BACKBONE NETWORK

CONFIGURING CUSTOMER EQUIPMENT NODES, EACH OF THE CUSTOMER EQUIPMENT NODES HAVING A RELATIONSHIP LINK TO AT LEAST ONE OF THE PROVIDER EQUIPMENT ELEMENTS

ASSIGNING ROUTE TARGETS TO EACH OF THE CUSTOMER EQUIPMENT NODES BASED ON TOPOLOGY REQUIREMENTS OF THE BACKBONE NETWORK AND BASED ON THE SET OF RULES

CONFIGURING EACH OF THE CUSTOMER EQUIPMENT NODES AND VRFS ON THE CORRESPONDING PROVIDER EQUIPMENT ELEMENTS TO FORM A LOGICAL TOPOLOGY

<del>/-- 710</del>

- 702

- 704

- 706

708

**FIG.** 7

Docket No.: 1033-LB1029
Inventor: Chen, et al.
Attorney: Russell W. White (512) 327-5515 **9/9** 

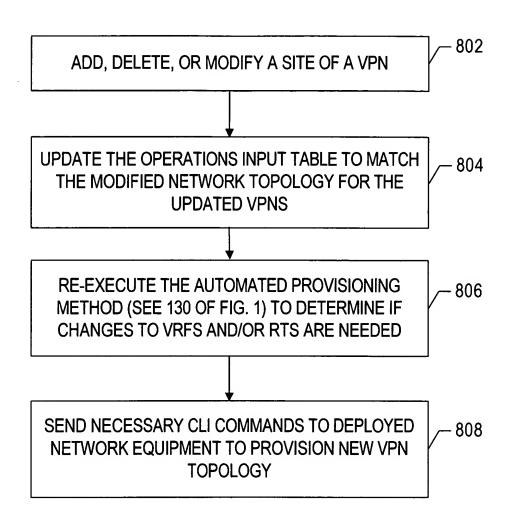


FIG. 8